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ART. XXI.—*Essay on the Classification of Parasitic Hymenoptera, &c.* By A. H. HALIDAY, M.A.

(Continued from page 106.)

Of the Ichneumones of the Second Line, (Ichneumones adsciti, Essenbeck.)

THE species which have been referred to the genus *Aphidius* appear to compose a natural group, from the uniform way in which the characters, common to them all, correspond with the habits of those few whose history is known from actual observation. They are minute *Ichneumones*, each individual being nourished by a single puceron; the empty skin of this is substituted for a cocoon, the larva being provided with no secretion of silk, like the others of this family. Accordingly, we find it solitary, devouring all the interior of its victim, and attaining a proportionate bulk. The spherical figure of that case adapts itself to the inflected attitude of the full grown larva, and of the pupa developed from it.^a The same position finally is subservient to the functions of the fly, which is thus enabled to bring the borer under the direction of her sight; for, being equal or superior in size to the objects of her attack,

^a I presume that the pupæ of the Chrysidæ are similarly inflected. “J’ai vu le *Cleptes nitidule* allonger beaucoup son tuyau en passant auprès d’une larve de *Tenthrede*, et le pousser vivement contre elle. Quoiqu’il lui eût fallu pour cela recourber son abdomen et diriger ce tuyau entre ses pattes en avant de la tête, l’opération entière fut l’affaire d’une seconde.”—*Le P. St. Fargeau*. Some of the petiolate *Pteromali* (*Miscogasteridæ*, Walker) also have the pupa bent double, though less completely; but these do not inflect the abdomen in oviposition.

she can find no footing on them. As they are accessible, and not defended by hair or a tough coat, the borer itself is short and delicate. A summary of these particulars will afford the most comprehensive notion of the group.

An acquaintance, though imperfect, with the economy of the insects composing it, has afforded, in the relation which subsists between this and the form of the parts in the imago, some data for estimating the comparative importance of their several variations. In the general considerations we have, consequently, ventured to overlook distinctions such as elsewhere are of much significance, and to assemble species offering considerable diversity in the antennæ, wings, and feelers. Hence we may be prepared to find the influence of similar variations modified and subdued, to a certain extent, in contiguous groups; while, in pursuing the chain a little further, some or all of these organs may affect a determinate character, through a protracted series of affinities. In the present family, generally, the antennæ may be said to vary indefinitely with sex and species; and, where we detect the tendency to a typical number, there is room to suspect an approach to one or other of the remaining Parasitic families; which has (if I may express it so) communicated its character to such adjacent groups. These approaches are few and evanescent, and while they may serve to indicate the external relations of the family, do not seem applicable, in a primary degree, to the further subdivision of it. The cells of the wings, by their number, figure, and position, afford distinctions generally precise and easily apprehended, constant in the sexes, and whose variations may be referred to a limited number of types; but these are not so readily generalized, and, on account of the abrupt transitions between them, sometimes yield no clew to the connexion of the groups which they distinguish. At the same time they furnish most convenient characters for the separation of the minor groups; and, if carefully compared with the variations of other parts, will be often of the highest value as obvious indications of characters more influential, but also more difficult of investigation. The mouth, whose structure enters so largely into most systems, does not exhibit much variety of development among insects whose instruments of industry and weapons of defence are seated elsewhere, and which scarcely seem to require nourish-

ment in the perfect state. *Agathis* and *Alysia*, indeed, in their types, present remarkable modifications of the lips and jaws, but, after a few removes, these too subside into the prevailing monotony. Of all the parts of the mouth, the feelers seem to afford the most convenient means of methodical division; their differences, like most characters determined by number, being easily seized by the eye and expressed with certainty. Such a method comes recommended also by the weight of authority, almost every recent arrangement of the family resting principally on those organs. Analysis has shown their variations to be of minor consequence in determining relations between the subdivisions of *Aphidius*, while the separation of that genus has made their application to the rest more easy. The objections arising from the former consideration will be lessened if we regard these last as nearer in affinity to the genuine *Ichneumones*; for they, throughout their myriad species and multiplied gradations of form, adhere almost invariably to one number, the incipient tendency to change appearing only at one point.^b And, indeed, in the single genus we have been considering, their extremes of variation are more distant than in all the remainder of the *Adsciti*. The figure and proportion of the joints are more constant in the maxillary feelers than in the labial, where the diminution of the penultimate joint makes the precise number sometimes difficult to determine, so that we shall gain in convenience by omitting the consideration of the latter at this stage. Following, in other respects, the arrangement of Von Essenbeck, let us place first those which have maxillary palpi of five joints, composing the family named by him *Bracones*. With respect to the nomenclature, it may be remarked, that he at first applied the generic name of *Bassus* to *Cryptus manducator* of Panzer, and from that type derived the appellation of his second family; more recently *Bassus* has ranked among the genuine *Ichneumones*, being appropriated, by Gravenhorst, to a group represented by *Anomalon lætatorium* of Panzer; to this Von Essenbeck has conformed, substituting the Latreillian genus *Alysia* in its place, yet,

^b The genus *Porizon*, which betrays a departure from the type in other particulars; the predominant characters, however, are unchanged; and the subgenus *Odontomerus* may almost be described as a *Porizon* resuming in its mouth and lower wings the ordinary character of genuine *Ichneumones*.

either from inadvertence or on principle, he has retained his original but now ambiguous name for the family. It seems more correct to obviate this duplicity of terms by adopting, instead of it, *Alysiidæ*, as proposed by Mr. Stephens. I should be still better pleased to avoid giving any names to these sections; regarding their separation, for the present, simply as a convenient artifice, which may possibly interfere with the discernment of their true relations, as much as it facilitates their examination in detail.^c It is never too soon to retrace an erroneous course, and I have to regret having hastily applied new-coined names to tribes so called, and similar subdivisions of the family: renouncing such innovations as, at least, premature, and retaining the name *Ichneumones*^d for the family at large, we may speak of these, as

Ichneumones which have no exterior cell of the disk in the upper wings, and do not inflect the abdomen completely, whose pupa is enclosed in a cocoon spun by the larva, and is not bent double;

And first, of those with maxillary palpi of five joints;

Fam.—BRACONES, *Ess.* BRACONIDÆ, *Stephens.*

The native species, so far as they are known to me, may, I think, be all arranged by relation to the four genera, *Agathis*, *Microgaster*, *Bracon*, and *Leiophron*, as exemplified by *Agathis malvacearum*, Latreille; *Ichneumon globatus*, Linné; *Bracon demigrator*, Fabricius; and *Cryptus sticticus*, Fabricius.

Having assembled the species I possess according as the

^c For the general characters with which Von Essenbeck has sought to corroborate this division seem vague and uncertain; but, from a cause alluded to before, they were drawn from a comparison of genera in some degree fortuitously assembled, so that no better result could be expected. If the families were sufficiently distinguished by external appearance, it is not likely that they would have eluded the tact and judgment of this distinguished author, to which our present subject is scarcely less indebted than a sister science. The contents of each family being reduced to more strict conformity with the principles of his method, I cannot discover any auxiliary distinctive characters of general application.

^d Or rather *Ichneumonidæ*, as used by British authors, for the sake of general analogy and harmony of nomenclature.

resemblance of one or other of these predominates, I find the resulting groups may be separated in this manner:—

Second brachial cell of the lower wings bounded externally by	{	three angles	AGATHIS, &c.
		two angles;	determinate and alike in the
		number of	sexes MICROGASTER, &c.
		joints in the	varying with sex { three . . BRACON, &c.
		antennæ	and species; cu- bital cells of the upper wings { two . . . LEIOPHRON, &c.

These characters have the appearance of being taken arbitrarily, the table being calculated simply to distinguish the groups, without exhibiting their relative position or connexion; and other schemes might be drawn up which would attain the same object, as, indeed, any one devised from such scanty materials is likely to prove imperfect in a more extended application. I do not attach much importance to this, as the temporary fabric is easily reconstructed when further information has shown its defects. But, if the standards selected possess the requisite qualities, the entireness and relative proximity of the groups may remain unaffected by any addition to their contents. The first three are so obviously indicated by external appearance, that there is little difference of opinion to be apprehended as to their existence or extent; but the combination of the fourth group rests in great part on the similarity of the trophi, since there is less resemblance in other respects between the proposed type and some of the species here associated with it, than the latter bear to a section of the genus *Perilitus*. I believe, indeed, that we should attribute this resemblance to a real affinity, and that the supposed families meet at this point. Now as they appear to approach at the other extremity also, and as the series through each, from one point of contact to the other, exhibits no manifest interruption, we have in this way a complete circle formed, to the exclusion of *Aphidius*, which seems to be thrown into a separate group. The different habits of that genus have already prepared us for such a result; but it will demand a more detailed and rigorous examination of the remaining genera than I am competent to give them, before it can be conclusively admitted. For greater convenience in designating species, the generic denomination of the type may be extended

to the entire of each group; and as Von Essenbeck has long since shown the affinity which subsists between *Chelonus* among the *Bassi* and *Microgaster* in the present family, I commence the latter with that genus. Here, however, seems to be the most convenient place to introduce a genus anomalous in its palpi, but bearing, on the whole, more resemblance to *Microgaster* than to any others of the family, although the differences are sufficient to prevent my comprehending them under one generic name, and even to leave their affinity open in some degree to doubt. This may be owing, partly, to the want of sufficient materials, the genus being founded on the examination of a single ill-preserved specimen.

GEN. II.—MIRAX.

Palpi maxillares 4-articulati, labiales 3-articulati: antennæ 14-articulatæ: occiput retusum: oculi glabri: mesothoracis scutum haud tripartitum: abdomen breve subsessile: aculeus subexertus.

Sp. *M. rufilabris*. Fem. *Niger, pedibus flavo-ferrugineis: alæ hyalinæ: os, clypeus, squamulæ et stigma ferruginea: abdominis segmenta 2 anteriora flava.* (Long. corp. .08. alar. .2.)

Caput thoracis latitudine, transversum crassum; occiput retusum; vertex late rotundatus; ocelli in triangulum; oculi parvi glabri:^e antennæ corpore parum breviores, graciles, 14-articulatæ; scapo ovato-cylindrico, pedicello extricato ovato, articulo tertio longiore quam scapo, reliquis longitudine decrescentibus: labrum transversum lateribus rotundatum, epipharynga obtegens, hujus tantum ligulâ apicali attenuata prostante; mandibulæ trigonæ apice curvatæ et tenuè bidentes; maxillæ lobus latus obtusus; labium integrum obtusum; palpi maxillares 4-articulati, articulis 1^{mo}. brevior, 2^{do}. paulo crassior; labiales 3-articulati: thorax ovatus depressus; prothorax inconspicuus; mesothoracis scutum rotundatum, planiusculum, sulculis ordinariis omnino nullis; metathorax rotundatus: alæ anticæ—stigma crassum rotundato-trigonum;

^e This character has had some weight in inducing me to separate the genus from *Microgaster*; it should be remembered, however, that the eyes are hairy in one section of the genus *Chelonus* (*Ch. sulcatus*, &c.), while they are naked in the rest.

areola disci antica parum remota; cubitalis interior sub stigmate clausa ad originem cubiti, nervum recurrentem prope apicem excipiens; cubitus obsoletus; nervi omnes exteriores evanescentes; alæ posticæ, areolâ brachiali 2^{da}. anterioris dimidiam longitudinem non æquante: pedes mediocres calcaribus parvis: abdomen thoracis longitudine, obovatum subdepressum, læve nitidum segmentis dorsi septem; ^f segmentum 1^{um}. gracile ascendens; posteriora lineari-transversa; sextum ventrale leviter carinatum, apice productum aculeum fulciens; aculeus apice subexertus.

GENUS III.—MICROGASTER.

Palpi maxillares 5-articulati, labiales 3-articulati: os breve: antennarum articulorum numerus determinatus mari feminaeque par: occiput concavum: oculi villosi: thorax depressus, scuto mesothoracis haud tripartito: pedes postici majores approximati: abdomen sessile aut subsessile brevissimum: valvula ventralis aculeum fulciens: corpus parvum, nigrum; modo flavo varium; rarius flavum: alæ diaphanæ.

Subgen.—ACÆLIUS.

Subgenus cum Chelono annectens.

Antennæ 20-articulatæ, scapo longiore; *femina* apice attenuatæ revolutæ.

Occiput concavum, definitum.

Abdomen 5-annulatum.

Tibiæ posticæ subclavatæ.

Alæ anticæ stigmate rotundato; areolâ radiali incompleta arcuata; areâ cubitali ubique lata.

Subgen.—MICROGASTER.

Generis typum complectens.

Antennæ 18-articulatæ scapo minuto.

Occiput retusum.

Abdomen 8-annulatum.

Tibiæ posticæ apice truncatæ.

Alæ anticæ stigmate trigono; areolâ radiali trigona; areâ cubitali medio valde coarctata.

Posticæ areolis radialibus 2, cubitalibus 2.

Subgen. I.—ACÆLIUS.

Adelius (lapsu calami). *Ent. Mag.* Vol. I. p. 262.

Corpus minimum: caput fere hemisphæricum, occipite contracto, concavo definito; vertice rotundato; ocelli in triangulum; oculi

^f Probably eight would be seen in recent specimens, that being the typical number in the *Ichnemonidæ*.

parvi villosi cum genis æquati: trophi fere quales *Microgastri* sed labrum minus, lineari-transversum, epipharyngis limbum undique retegens: antennæ 20-articulatæ, scapo longiusculo incrassato; flagellum *maris* gracilius filiforme; *feminae* medio crassius compressum, apice attenuatum revolutum (ut in *Chelonis feminis*): thorax fere *Microgastri*; metathoracis (i. e. *propodei*) margo posticus utrinque denticulatus: alæ anticæ — stigma semiovatum; areola disci antica vix remota: cubitus arcuatus mox abruptus, areolam radialem ovatum inchoans: areolæ cubitales 2, interior sub stigmate clausa ante originem cubiti; nervi exteriores sensim evanescent; nervus recurrens fere interstitialis: alæ posticæ, areola humeralis distincta; brachialis anterior basi sensim attenuata; posterior mediocris parum distincta; areolæ exteriores oblitteratæ: pedes postici crassi compressi, tibiis apice rotundatis, subclavatis (ut in *Chelonis* nonnullis): abdomen thorace brevius, ovatum subdepressum, segmentis dorsi 5; 1^{mo}. maximo dimidium totum obtegente, lævi; 5^{to}. minuto:—ventris 6; 6^{to}. subcarinato: aculeus vix subexertus.

Sp. 1. M. A. Germanus. Mas et Fem. *Pedibus anterioribus testaceis*. (Long. corp. .08; alar. .17.)

Fem.—Niger: os et palpi testacea: antennæ corpore longiores, medio multo crassiores: pedes anteriores testacei, coxis, trochanteribus basi, et femoribus latere supero fuscis; postici fusci, tibiis basi testaceis: alæ albidæ; stigmate fusco; medio latè infumatæ, lineolâ albida parum distincta sub basi stigmatis; squamulæ nigræ: thorax subtiliter punctulatus: abdomen læve nitidum.

Variat facie fere tota, pedibus anticis, coxis et trochanteribus testaceis.

Mas.—Antennis longioribus gracilioribus apice teretibus.

Habitat in *Salice Caprea* minus frequens.

Sp. 2. M. A. subfasciatus. Mas et Fem. *Pedibus nigris*. (Long. corp. .06; alar. .14.)

Fem.—Præcedente fere duplo minor: antennæ minus incrassatæ: palpi et tarsi anteriores fusci; trochanteres apice picei: alarum fasciæ 2 nigricantes manifestiores, lineolâ albidâ disjunctæ.—

Mas.—Antennæ longiores filiformes.

Habitat in *Salice argentea* littorum rarissimè.

Subgen. II.—MICROGASTER.

Microgaster *Latr. H. N. XIII. Gen. vi.*
Spinola. Ins. Lig. II. p.
144. Essenb. Act. Acad.
Tom. IX. A. D. 1818.
Curtis E. B. 321.

Ichneumon. (Sec. Leptogastri.) *Latr. H. N. III.*

Ichneumon. Fam. 2^{da}. *Jurine. (Agathide et Microdo*
commixtis.)

Vipio *Fallen. Spec. Meth. Hyme-*
nopt.

Caput oblatum, thorace angustius, antice orbiculatum; vertex arctus; occiput retusum, vix unquam definitum; ocelli fere in lineam curvam; oculi ovati parum prominuli, villosi; facies supra clypeum leviter bifoveolata: labrum transversum lateribus rotundatum, epipharynga obtegens, hujus tantum ligula apicali attenuata prostante; mandibulæ curvatæ, apice bidentes; maxillæ lobus rotundatus; labium integrum obtusum; palpi maxillares articulis 5, 1^{mo}. brevior, 2^{do}. crassior; labiales 3-articulati: antennæ 18-articulatæ corpore longiores vel breviores; *maris* sæpe incrassatæ apice attenuatæ; *feminae* breviores et graciliores; scapus perbrevis ovatus; pedicellus fere retractus; articuli reliqui cylindrici, striati, medio cingulati quasi duplicati: thorax oblongus subdepressus; prothorax inconspicuus; mesothoracis scutum rotundatum planiusculum, absque sulculis ordinariis; scutellum trigonum planiusculum; metathoracis scutellum distinctum foveolatum; postscutellum (*Propodeon*) undique discretum, segmento 1^{mo}. (*Metapodeo*) sæpius conforme et pariter exculptum: alæ anticæ latiusculæ; stigma trigonum; areola disci antica remota quinque angularis; cubitus fere rectangulatim flexus, areolam radialem trigonam paulo ante apicem alæ concludens; area cubitalis sub angulo cubiti valde coarctata, areolâ intermedia ibidem, trigona seu stapiæformi minuta, aut nulla; areola interior nervum recurrentem excipit; areola brachialis posterior ultra anteriorem elongata; posterior disci brevissima: alæ posticæ— areola brachialis anterior angusta, ante medium subito coarctata sub sinu nervi subcostalis, apice cum cubitali contigua; posterior illâ plus duplo brevior, vix longior quam latior; radiales 2, interior minor; cubitales 2, interior brevissima: pedes postici

approximati elongati et sæpius incrassati, femoribus compressis, coxis magnis, tibiis apice truncatis; calcaria plerisque elongata subulata: abdomen sessile aut subsessile thoracis longitudine vel eo brevius, segmentis dorsi octo, ventris sex: segmenta anteriora multimodis difformia, primi scutum dorsale plerisque angustatum, latera membranacea utrinque retogens ultimum minutissimum; ventris segmenta anteriora plerunque pallido pellucet, sextum carinatum aculeum fulciens nec libere mobile ut in *Agathide*: aculeus modo subexertus vel reconditus, modo abdominis longitudine et apice decurvus.

Lepidopterorum larvis genus maxime infestum. Mater erucam vix repugnantem insiliens, terebræ ictu repetito ova plurima cuti infigit (vel pilis agglutinat?):^g larvæ hinc enatæ intra corpus erucæ degunt gregariæ adipem depastæ extis intactis; maturæ mox erucæ cute perforatâ undique prorumpunt, et statim metamorphosi se accingunt, folliculum subcylindricum e serico subtili sibi cuique nentes; quos modo annectunt ramulo, lateribus ad invicem agglutinatos et in modum alvearis laminæ dispositos; modo foliis, parietibus, arborum truncis, seriatim vel temere aggregatos, reticulo laxiore universis substrato; vel denique cunctos intra globum spissum bombacinum obtectos culmo graminis alligant. Metamorphosin peragunt intra paucas septimanas; alii hyemem in folliculis durant, pro anni tempore. Insectum in pupario latet corpore extenso, antennis et pedibus inflexis. Folliculi operculis pulsu capitis excussis, declaratis dant exitum. Ut hi erucas sic ipsos Crypti nonnulli minores enecant; saucii tamen folliculos ut integri conficiunt, at non sibi.^h

^g *Ichneumon necator*. Scharfenberg.

^h The cocoons of this tribe are composed of a very fine glossy silk of one colour, which can be wound off like that of the silkworm, while in most of the remaining *Ichneumones* they are of a gummy texture and banded. They are arranged in various modes, examples of which, and a minute account of the process of construction, may be found in the second volume of Reaumur's Memoirs. The larvæ are generally supplied with a two-fold secretion of silk; that which comes out first being of a looser and coarser texture, and serving for a common envelope for the whole society. The sections into which the genus has been divided, do not appear to be characterised by a particular disposition of the cocoons, as this differs in species the most nearly related. Some are collected into a ball, and entirely concealed within a thick cottony mass attached to a stalk of grass (as *M. globatus*, *intricatus*, &c.); others are fastened round a twig, and arranged side by side, like the cells of a honeycomb (*M. alvearius*, *alvearifex*). In many they are scattered, or collected in an irregular heap, and covered with a loose web of open texture, but tough, as is the case with *M. glomeratus*, the most familiar species, which keeps down the numbers of the common white butterfly. A correspondent in Loudon's Magazine, Vol. III. p. 52, affirms that the caterpillar of the butterfly

SECTIO A.

Areolæ cubitales tres in alis anticis. (Trichori.)

(A.) a.

Abdomen depressum rotundatum læve: aculeus reconditus: alæ coloratæ; anticæ areola radiali angustiore acuminata, cubitali intermedia distincta: pedes postici minus elongati: calcaria minuta: statura mediocris.

Sp. 3. *M. mediator.* Mas et Fem. *Abdomine antice pedibusque flavo-ferrugineis; segmenti primi vittâ nigrâ.* (Long. corp. .16; alar. .33.)

Fem.—Niger, capite et thorace granulato-opacis, pallido-pubescentibus: antennæ graciles corpore longiores: palpi flavi: pedes graciles flavo-ferruginei, posticorum coxæ basi et tarsi nigro-fusca: alæ flavescentes aut ferrugineæ, stigmatibus fusco basi determinatè pallido; squamulæ flavo-ferrugineæ: metathorax rugulosus: abdomen obovatum planum, læve nitidum; segmenta 1^{mum}, 2^{dum}, et 3^{tii}. basis plerunque flavo-ferruginea aut fulva; primi scutum lineare elevatum, punctatum, nigrum; 2^{di}. latera arcuato-impressa.

Variat, segmenti primi lateribus membranaceis infra scutum lineare contractis, unde abdomen subpetiolatum evadat; his etiam segmenta intermedia obscuriora; tibiæ posticæ et tarsi intermedi apice fusca.

Variat, antennis subtus et pedibus totis flavo-ferrugineis.

Variat, coxis omnibus, femoribus intermediis basi, posticis totis nigro-fuscis; alis fusco-ferrugineis; abdominis basi obscurius rufescente.

spins the outer web over its parasites, and Goedart has written the same. Madame Merian has a similar statement relative to the caterpillar of *Cynthia Cardui*, and its *Microgaster*. I am more inclined, however, to place my faith in the usual accuracy of Reaumur. It would be a singular fact, that the caterpillar of a butterfly which, for its own transformation, produces only a few threads, which fasten the tail and girt the middle of the chrysalis, should become provided with this superabundant supply in consequence of its interior being nearly devoured. In the case of those species, indeed, which infest the tribes of *Bombyces* and *Arctiæ*, it appears that the imperfect cocoon spun by the caterpillar may serve for the envelope of its parasites (see *M. consularis*, No. 15). In general they are found in Lepidopterous larvæ; but Mr. Curtis has obtained one species out of that of an aphidivorous fly.

Mas.—A *feminâ* vix distinguendus antennis paullo longioribus.

Habitat in agris autumnno passim; varietates α , β , frequentes; γ , δ , rarissimè.—(*Mus. Soc. Ent.*)

Sp. 4. *M. spectabilis*. Fem. *Femoribus anticis, tibiis tarsisque testaceis; alis ferrugineis, fasciolâ albidâ; antennis brevissimis.* (Long. corp. .13; alar. .25.)

Fem.—Niger capite thoraceque granulato-opacis, pallido-pubescentibus: occiput lævissimum definitum: antennæ capite cum thorace paulo longiores: palpi ferruginei: femora media medio, postica tota, coxæque omnes nigro-fusca: alæ dilute ferrugineæ; stigma nigro-fuscum, basi determinate pallidum, excurrit hinc fascia linearis albida trans alam; areola radialis insuper medio pallescit; squamulæ fusco-ferrugineæ: metathorax brevior quam præcedenti, rotundato-declivis, rugulosus: abdomen ovatum planum, læve nitidum, lateribus baseos sordide flavis; segmentum primum ascendens, scuto oblongo elevato, punctulato, medio levigato: valvula ventralis apice hians etsi aculeus penitus sit absconditus: pedes breviores quam præcedenti, calcaribus paulo longioribus.

Habitat in Hibernia boreali rarissimè.

Sp. 5. *M. ingratus*. Fem. *Pedibus rufis; coxis nigris; alis fucis.* (Long. corp. .18; alar. .36.)

Fem.—Brevis crassus niger: antennæ corpore longiores crassiusculæ: palpi apice ferruginei: pedes validi, rufo-ferruginei; coxis et trochanteribus nigris; tibiis posticis apice et tarsis iisdem fuscis; calcaria minuta fusca: alæ fuscae, costa latissimâ interne flavente; stigma basi flavescens; squamulæ obscure ferrugineæ: metathorax brevis rugulosus: abdomen breviter ovatum subdepressum; segmenti 1^{mi}. ascendentis scutum convexum læve subquadratum, latera anguste lutescentia; anus rotundatus: aculeus (si revera *femina* sit) penitus absconditus.

Habitat—————(*Mus. J. Curtis.*)

Sectio (A.) b.

Abdomen subtus compressum, dorso planum, segmentis anterioribus latis aciculatis: aculeus exertus, valvulis subclavatis: alæ ut præcedentibus: pedes postici crassi: calcaria longa: statura major.

1°. *Segmentis tribus aciculatis.*

Sp. 6. *M. infumatus*. Mas. *Pedibus rufis, coxis nigris.*
(Long. corp. .2; alar. 42.)

Microgaster deprimator. Curt. *E. B.* 321. No. 1.

Mas.—*M. globato* duplo major; niger: mandibularum cuspis palpique obscure rufi: pedes rufi trochanteribus concoloribus, coxis et unguibus nigris: alæ fuscae, stigmatē toto intensius concolore: abdominis segmenta 4^{um}. et sequentia conjunctim vix longitudine primi, lævia.

Habitat “Prodiit e larvis *Acronyctæ Salicis*, mense Septembre.”
Curtis. l. l.—(*Mus. J. Curtis.*)

Sp. 7. *M. russatus*. Mas et Fem. *Abdomine pedibusque rufis; ano nigro.*

Fem.—Niger: antennæ corpore parum longiores, subtus rufæ: mandibularum cuspis palpique rufi: pedes crassi rufi coxis concoloribus; postici apice summo tibiæ et tarsorum fuscis; ungues nigri: alæ fusco-ferrugineæ intus lutescentes; stigma subfuscum, basi flavum; squamulæ fuscae: areola minor quam præcedenti: thoracis scutum nitidum punctulatum, dorso medio depressum et obsoletiùs trilineatum; metathorax quadratus, magis angulatus quam in illo, rugulosus: abdomen segmentis tribus anterioribus rugulosis rufis; reliquis lævissimis dorso nigris; subtus totum rufum: aculeus segmento primo longior, valvulis nigris. (Long. corp. .2; alar. 42.)

Mas.—Præcedentis mare longior: antennæ corpore dimidio longiores, articulis singulis valde elongatis: abdomen solito longius. (Long. corp. .23.)

Habitat in littoribus limosis Hiberniæ borealis rarissimè.—(*Mus. Soc. Ent.*)

2°. *Segmentis duobus aciculatis.*

Sp. 8. *M. globatus*. Mas et Fem. *Pedibus rufis; coxis nigris.* Fem. *Aculeo abdominis dimidio brevior.* (Long. corp. .17; alar. 36.)

Ichneumon globatus **Linn. Fn. S.* 1645.

gossypinus. (*Retz.*) *De Geer. I. T.* 29. F. 13, 14.
Geoffr. II. p. 320.

Cryptus globatus . . . *Fabr. Syst. Piez.* 89. 88.

Microgaster globatus . *Spin. Ins. Lig.* II. p. 147. No. 1.

Ichneumon globator . *Thunb. Act. Petr.* IX. p. 349.

Fem.—*Niger* : mandibulæ apice rufæ ; palpi pallidiores : pedes rufi, coxis et trochanterum basi nigris : alæ flavescentes apice fuscescentes ; stigma fuscum : venter antice rufo pellucens ; aculeus vix longitudine segmentorum 2 anteriorum.—*Mas.* similis, antennis longioribus, abdomina magis oblongo.

Habitat in agris æstate et autumno passim frequens :—" In graminum culmis circa autumnum in pratis non infrequens est folliculus sericeus magnitudine ovi columbini solitarius albus e quo prodeunt numerosi *Ichneumones*." *Linné l. l.*—*Fabricius* adjicit " in *Phalenarum* larvis."—Synonyma vero a *Linneo* et *Fabricio* huc adscita cautius excutienda sunt, quum uterque potius folliculos conglobatos (quod pluribus et longe diversis speciebus commune accidit) quam auctorum descriptiones respexisse videtur.—(*Mus. Soc. Ent.*)

Sp. 9. *M. annulipes*. *Fem.* *Pedibus rufis, posticis fusco-annulatis ; coxis nigris ; aculeo abdomine parum brevior.*

Microgaster annulipes. *Curtis. E. B.* 321. No. 4.

Fem.—*M. globato* æqualis et simillimus : antennæ subtus rufescentes : pedum posticorum femora et tibiæ apice, digitique singuli fusco-annulata : abdominis segmentum 3^{tium}. basi punctulatum ; venter totus rufescens.

Habitat " in larvis *Bombycis* cujusdam : folliculi albi." *Curtis. l. l.*
—(*Mus. J. Curtis.*)

Sp. 10. *M. Spinolæ*. *Mas et Fem.* *Pedibus rufis, basi nigris ; alis apice denigratis.* *Fem.* *Aculeo brevi.* (Long. corp. .19 ; alar. .41.)

Fem.—*M. russato* brevior at robustior ; ater dense atro-pubescent : antennæ crassiores quam in præcedentibus : palpi rufi : pedes omnium longe validissimi, rufi coxis et trochanteribus totis nigris ; femora intermedia basi præsertim subtus, antica et postica perbrevispatio aut vix, nigricantia ; tibiæ posticæ basi ipsâ pallidiores, apice summo fuscae ; tarsi postici et ungues omnes fusi : alæ

pallide flavescentes, nigredine apicis oblique definitâ ; stigma sub-fuscum basi sordide lutescens : segmentum tertium obsoletissime punctulatum ; aculeus segmentis 2 anterioribus conjunctim brevior.—*Mas.* antennis eximie incrassatis, apice attenuatis.

Habitat in littoribus limosi Hiberniæ borealis at infrequens.—(*Mus. Soc. Ent.*)

Sp. 11. *M. meridianus.* Mas et Fem. *Pedibus rufis, basi nigris ; alis infuscatiss.* Fem. *Aculeo abdominis dimidio longiore.* (Long. corp. .16—.18 ; alar. .36—.40.)

Fem.—Palpi nigri aut fusci : femora antica basi, media latius aut fere tota nigra ; postica rufa lineolâ superâ et aliâ inferâ, vel puncto tantum nigricantibus ; tarsi apice fusci : alæ nebulosæ fuscae, stigmatibus fusco-ferrugineo : aculeus multo longior et crassior quam sequenti, pro cuius varietate aliter duxerim.—*Mas* similis.

Habitat cum sequente rarissime.

Sp. 12. *M. messorius.* Mas et Fem. *Tibiis testaceis ; alis denigratis.* Fem. *Aculeo abdominis dimidio brevior.* (Long. corp. .15—.18 ; alar. .30—.36.)

Fem.—*M. globato* plerunque minor, præsertim brevior, antennis brevioribus : niger pubescens : palpi nigri vel apice rufescentes : femora antica apice et tibiæ testacea, postica apice fusca ; tarsi anteriores testacei apice fusci : alæ dorso incumbentes fere carbonariæ videntur ; anticæ vel fusè infuscatæ ut in præcedente ; vel basi pallidæ, apice nigricantes ; fasciis insuper duabus irregularibus fractis et vix distinctis (alterâ sub stigmate, alterâ interiore), nigricantibus ; stigma fuscum : posticæ nigricantes, prope costam intus pallescentes : metathorax brevior quam *M. globato*, et abdomen medio latius : aculeus segmentis 2 anterioribus conjunctim fere brevior.—*Mas*, antennis incrassatis (minus tamen quam *M. Spiniolæ*), et apice attenuatis.

Variat Fem. rarius, femoribus rufis, anticis basi, posterioribus supra et subtus nigricantibus.

Habitat in pratis æstate et autumnò passim frequens.—(*Mus. Soc. Ent.*)

Sp. 13. *M. luctuosus.* Mas. *Tibiis anterioribus rufescentibus ; alis infuscatiss ; segmenti 1^{mi}. punctis lateralibus apicis luteis.* (Long. corp. .18 ; alar. .36.)

Mas.—Niger pubescens : palpi nigri : genua, tibiæ tarsique antici et calcaria rufescentia ; tibiæ intermediæ apice fuscæ, posticæ vix basi summa rufescentes : alæ fuscæ nebulosæ, stigmatibus fuscis : abdomen subrotundatum segmentis 2 equidem rugulosis, sed primi scuto angustiore quam secundo, unde margines illius laterales membranacei lutei extant. *Hic itaque in sectionem A. a. quodammodo prodendit.*

Habitat in Anglia meridionali mihi semel captus.

Sectio (A.) c.

Abdomen subcompressum segmento primo angustato : aculeus brevissimus : areola minutissima, fere imperfecta : alæ hyalinæ ; areola radialis latior in apicem rectâ excurrens : pedes postici elongati : calcaria longa : statura parva. *Patet itaque hos in sectionem B. transitum parare. Differunt autem constanter, areâ cubitali multo magis coarctata.*

Sp. 14. *M. alvearius.* Mas et Fem. *Flavus thorace postice abdominisque dorso nigris.* (Long. corp. .12 ; alar. .22.)

* Réaumur II. T. 35. F. 7.
Mem. 11. p. 432.

L'Ichneumon a coques en }
forme de rayons de ruche. } Geoffr. II. p. 322. No. 2.

Ichneumon alvearius *Fabr. Suppl. 232. n. 232.*

Cryptus *Fabr. Syst. Piez. 90. n. 91.*

Microgaster alvearius *Spin. I. L. II. p. 149. n. 6.*
Curtis. E. B. 321. fig. ibid.
No. 6.

Fem.—Flavo-ferrugineus : antennæ corpore parum longiores fuscæ, base subtus ferrugineæ : ocelli fusco-cincti : oculi fusci : pedes pallidiores ; posticorum femora et tibiæ apice, tarsique fere toti fusciscentia : alæ hyalinæ, stigmatibus nervisque nonnullis dilute ferrugineis, plerisque decoloribus : metathorax supra nigricans, punctatus : segmentum 1^{mum}. scuto angustiore aciculato, lateribus flavum ; 2^{dum}. aciculatum, 3^{tio}. non brevius ; reliqua lævia : venter antice flavus, postice niger : aculeus vix subexertus.—*Mas similis.*

Habitat "in *Phalenæ Crategatæ* larvis : folliculi albi, circa ramulum alvearis modo ordinati."—(*Mus. J. Curtis.*)

Sp. 15. *M. consularis*. Mas et Fem. *Antennis subtus pedibusque flavo-ferrugineis, posticorum geniculis fuscis.* (Long. corp. .14; alar. .3.)

Fem.—Niger: antennæ corpore longiores subtus latè rufescentes: os ferrugineum; palpi pallide flavi: pedes flavo-ferruginei; posticorum coxæ latere extero, femora et tibiæ apice, tarsique fere toti fusciscentia: alæ hyalinæ, stigmate ferrugineo basi pallidiore; nervis disci medii ferrugineis, exterioribus decoloribus, interioribus flavicantibus; squamulæ ferrugineæ: thorax confertim punctulatus; metathorax subtiliter aciculatus: segmentum primum scuto oblongo aciculato, lateribus flavis; 2^{dum}. breve apice bisinuaturn, obsoletiùs aciculatum; reliqua fere lævia: venter flavescens postice niger.—*Mas*, antennæ subtus basi tantum rufescentes: stigma totum fuscum.

Habitat in larvâ pilosâ *Arctiæ*, quæ folliculos hujus conglobatos secum una reticulo laxo filorum pilis suis commixto involverat in folio *Rubi* prope Londinum. Folliculi candidi.—(*Mus. G. C. Hyndman.*)

Sp. 16. *M. flavipes*. Fem. *Antennis subtus pedibusque flavis; coxis posticis nigris.* (Long. corp. .1; alar. 22.)

Fem.—*M. alveario* gracilior: niger: antennæ breviores articulis apicis magis discretis; flavæ, supra fuscae, scapo et apice toto concoloribus: os, palpi pedesque flavi; unguiculi tantum sub-fusci; coxæ posticæ totæ nigræ: alæ hyalinæ stigmate dilute ferrugineo, nervis disci medii perpaucis pallidioribus, reliquis decoloribus; radix et squamulæ flavæ: thorax subtilissime punctulatus; metathorax sublævis: segmentum primum scuto angustiore oblongo aciculato; 2^{dum}. 3^{tio}. haud brevius, subtiliùs aciculatum; reliqua lævia: ventris latera pallide flava.

Habitat in *Corylo* Hiberniæ borealis rarissimè.

Sp. 17. *M. calceatus*. Fem. *Pedibus flavo-ferrugineis; posticis fusco variis, coxisque nigris; alis apice denigratis.* (Long. corp. 17; alar. .4.)

Fem.—Niger nitidus: antennæ corpore longiores, teretes, totæ nigræ: palpi flavescents apice fusci: pedes anteriores flavo-ferruginei tarsis fusciscentibus; posticorum coxæ nigræ, femora ferruginea apice fusca, tibiæ pallidæ apice tarsisque fuscis: alæ limpidæ apice denigratæ, stigmate nigro-piceo, nervis fuscis, squamulis piceo-stramineis: thorax subtilissime punctulatus;

metathorax rotundatus : segmentum primum brevius quam præcedentibus, scuto latiore elevato, apice rotundato, lateribus luteis ; 2^{dum}. 3^{tio}. æquale, bistriatum ; reliqua lævia : ventris latera antice sordide lutescentia.

Habitat Hiberniam borealem ; in gramine captus, semel.

Sectio B.

Areolæ cubitales duæ. (Dichori.)

Alæ hyalinæ ; areola radialis latior, in apicem recta excurrens ; posticarum areolæ radiales et cubitales propter nervos decolores minus conspicuæ, at luminis obliquo reflexu semper distinguendæ : calcaria longa : statura parva.

Incipit ordo a speciebus longè-aculeatis, abdominis dorso planiusculo, segmenti 1^{mi}. scuto oblongo. Mediante *M. Umbellatarum* (No. 33.) attingimus species paucas (No. 34—38.) abdomine compresso, segmenti ejusdem scuto tenuissimo insignes : aculeus illis modo porrectus, modo brevissimus ; sequentibus semper brevissimus quarum proximæ propter scutum illud adhuc angustatum, *M. glomeratum* (No. 41.) mox inducunt : deinde reliquarum usque in calcem, segmenta anteriora fere æquilata aciculata Sectionem A. b. quodammodo referunt.

Sp. 18. *M. equestris. Squamulis et pedibus fulvis, coxis nigris. Fem. Valvulâ ventrali subtruncata ; aculeo elongato arcuato. Mas. Forcepe anali crasso exerto.* (Long. corp. .15—.17 ; alar. .34—.36.)

M. globato gracilior at vix minor ideoque maximus ex hac sectione.—*Fem.* antennæ corpore breviores : palpi picei : pedes fulvi ; tarsi posteriores fuscescentes ; coxæ nigræ intermediæ apice fulvæ : alæ flavescentes, stigmatibus fusco-ferrugineo ; nervis fuscis, interioribus flavicantibus ; squamulæ fulvæ : thorax nitidus ; metathorax subtiliter punctulatus : segmenti 1^{mi}. scutum angustum subtilissime punctulatum 2^{dum}. breve tripartitum lateribus fulvenscens : venter antice rufo pellucens, segmentis anterioribus brevissimis ; 6^{to}. maximo oblique truncato, anum non attingente, nec acuminatâ ut in plerisque speciebus aculeo longo præditi : aculeus abdomine parum brevior deorsum curvatus.—*Mas.* antennæ corpore longiores graciles : femorum posteriorum linea supera, tibiæque eadem apice fuscescentes : forceps analis ingens penitus exertus.

Habitat in pratis herbidis æstate et autumno passim frequens ; in floribus *Jacobeæ* apricans.—(*Mus. Soc. Ent.*)

Sp. 19. *M. albipennis*. *Thorace lævissimo; tibiis basi ferrugineis; alis albis, stigmatе flavo-piceo*. Fem. *Aculeo elongato arcuato*. Mas. *Forcipe anali exerto*. (Long. alar. .22.)

Fem.—*M. candidato* (No. 21) simillimus dimidio minor, statura longior: pedes graciliores picei, tibiis basi tantum ferrugineis: stigma flavo-piceum, cubiti basis et costa concolores, nervi reliqui albidi: aculeus quam illi manifeste longior et crassior, arcuatus ut in præcedente fere, sed valvula ventralis cuspidata anum equans.

Habitat in arvis autumnno minus frequens.—(*Mus. Soc. Ent.*)

Sp. 20. *M. infimus*. Mas et Fem. *Thorace lævissimo; tibiis basi fuscis; alis obscuris*. Fem. *Aculeo dimidii abdominis longitudine*. (Long. alar. .20—.24.)

Parvus præcedente vix major: antennæ *feminæ* longiores: tibiæ in utroque sexu basi summa fusco-ferrugineæ: alæ obscuræ aut fere exalbidæ, stigmatе nervisque piceis: metathorax lateribus vage punctulatus: abdomen quam illi brevius; segmenta antica conformia: aculeus crassiusculus rectus valvulæ ventrali incumbens.

Habitat ad litora minus frequens.—(*Mus. Soc. Ent.*)

Sp. 21. *M. candidatus*. *Thorace lævissimo; alis niveis stigmatе nigro*. Fem. *Tibiis basi, anticis totis flavo-ferrugineis; aculeo abdomine parum breviorе*. Mas. *Tibiis basi ferrugineis; segmenti primi scuto apice subrotundato*. (Long. corp. .13; alar. .27.)

M. glomerato æqualis: niger sericeus (i.e. subtilissimè albo-pubescent).—Fem. antennæ corpore breviores planè filiformes: palpi fusci: pedum anticorum genua, tibiæ tarsique, posteriorum tibiæ basi flavo-ferruginea: alæ niveæ, nervis nonnullis disci medii piceis, reliquis albis; stigma nigro-piceum, costa concolor basi flavescens: thorax lævissimus: segmenti 1^{mi}. scutum oblongo-quadratum et reliqua lævissima: aculeus abdomine brevior gracilis, perparum curvatus: valvula ventralis cuspidata anum æquans ut in plerisque.—Mas, antennæ corpore longiores teretes; tibiæ anticæ medio infuscatæ: alarum costa latiûs, et nervi plures nigricantes: segmenti 1^{mi}. scutum multo angustius, apice subrotundatum; 2^{dum}. arcuato impressum.

Habitat in *Salice argentea* arenarum, et alibi litorum satis frequens.—(*Mus. Soc. Ent.*)

Sp. 22. *M. Xanthostigma*. Mas. *Thorace lævissimo; tibiis basi, anticis totis flavis; alis candidis, stigmatе flavo.*

Mas.—Præcedenti æqualis et simillimus: palpi flavi, basi fusi: alæ candidæ; stigma flavum, nervo ambiente et subcostali nigricantibus; costali et cubiti basi stramineis; reliquis albis.

Habitat in gramine bis atque iterum lectus.

Sp. 23. *M. lacteipennis*. Mas. *Thorace lævissimo; tibiis basi flavo-ferrugineis; alis niveis, stigmatе nigro; segmenti 1^{mi}. scuto apice æquilato.* (Long. corp. .15; alar. .32.)

Curt. E. B. 321. n. 10.

Mas.—*M. candidato* simillimus plusquam dimidio major: antennæ validiores: alarum costa et stigma nigro-picea; cubitus basi ferrugineus; nervi reliqui candidi: segmenti primi scutum quam illius *mari* latius, apice non attenuatum nec rotundatum; secundi lineola tantum lateralis impressa.

Habitat ———— (*Mus. J. Curtis.*)

Sp. 24. *M. annularis*. Mas et Fem. *Thorace lævissimo; pedibus anterioribus, posticorum tibiis tarsisque basi et squamulis flavis; stigmatе bicolore.* Fem. *Aculeo abdomine breviorе.*

Fem.—*M. candidato* paullo minor brevior: niger sericeus: antennæ corpore parum breviores, graciles planè filiformes, articulis vix manifeste discretis: palpi flavi: pedes anteriores flavi; coxis nigris; femora media basi infusca; posticorum tibiæ et metatarsi basi flava: alæ limpidæ aut stramineo-candidæ; stigma fuscum basi pallidum; nervi nonnulli disci medii subfusi, reliqui decolores: costa interiùs, radix et squamulæ pallidè flavæ: abdomen paulo brevius quam *M. candidato*, lateribus ventris flavo-pellucidis: aculeus ut illi: valvula ventralis minus acuta.—*Mas* concolor; antennæ elongatæ gracillimæ apice teretes.

Habitat in *Corylo* minus frequens.

Variat, Fem.—Major, antennis paulo brevioribus: femora intermedia latiùs tibiæque cædem apice fusca: stigmatis punctum pallidum minutum: squamulæ basi et humeri fusca.

Habitat in *Salice Russelliana* mihi lectus rarissimè.—(*Mus. Soc. Ent.*)

Variat, Mas.—Palpi basi fusci: pedes antici basi nigri; posteriorum tibiæ basi, tarsi latiùs; mediorum femora insuper apice flava: alarum stigma dilutius, basi pallescens; squamulæ nigræ: annon distincta species?

Habitat adsunt exemplaria 4 nescio ubi capta.—(*Mus. Soc. Ent.*)

Sp. 25. *M. decorus*. Fem. *Thorace lævi; pedibus fulvis, coxis nigris; valvulâ ventrali acuminata; aculeo abdominis longitudine.* (Long. corp. .14; alar. .30.)

Fem.—*M. glomerato* major: antennæ corporis longitudine apice teretes: palpi pallide ferruginei basi fusci: pedes fulvi aut ferruginei; trochanteres antici sæpius concolores, postici et coxæ nigra; femora puncto infero baseos, postica lineolâ superâ fuscis; tibiæ posticæ summâ basi pallidiores, apice fuscae; tarsi iidem fere toti fusci: calcaria pallida: signaturæ pedum vero modo manifestiores extant modo obsoletissimæ: alæ amplæ hyalinæ, stigmate fusco-ferrugineo; squamulis nigris: thorax lævis nitidus: segmento 1^{mi}. scutum oblongum læve; venter rufo-pellucens.

Variat, Fem.—Pedes fusci, anticorum femora et tibiæ subtus, posteriorum femora lineolâ longitudinali tibiæque basi ferruginea.—*Mas.* concolor (huic varietati) *feminæ*: antennæ multo longiores.

Habitat in *Quercu*, *Larice* passim minus frequens.—(*Mus. Soc. Ent.*)

Sp. 26. *M. hilaris*. Fem. *Thorace subtilissime punctulato; squamulis et tibiis flavo-testaceis, posticis apice fuscis; stigmate bicolore; aculeo abdominis longitudine.*

Fem.—Statura et magnitudo præcedentis: antennæ corpore longiores teretes: palpi flavi: femora antica basi nigra, intermedia summo apice; tarsi anteriores, basis summa posticorum, et tibiæ flavo testacea; tibiæ posteriores apice fuscae: alæ amplæ hyalinæ, stigmate fusco-ferrugineo basi flavo; nervis disci medii dilute ferrugineis, exterioribus decoloribus, interioribus flaventibus: squamulæ flavo-testaceæ: thorax nitidus dorso subtilissime punctulatus lineolâ longitudinali et scutelli medio lævigatis; meta-thorax et segmenti primi scutum punctulata.

Sp. 27. *M. contaminatus*. Fem. *Thorace punctulato; squamulis tibiis tarsisque testaceis; aculeo abdomine brevior.* (Long. alar. .32.)

Fem.—Præcedentibus æqualis, abdomine brevior obtuso: antennæ corpore fere longiores teretiusculæ: palpi, femora antica basi

nigra, posteriora summo apice, tibiæ tarsique flavo-testacea: alæ amplæ obscure flavescentes, stigmatе nervisque piceo-flavis; squamulæ flavo-testaceæ: thorax punctulatus; metathorax et segmenta 2 anteriora aciculata.

Habitat lectus in nemore sub-montibus Mourne, Hiberniæ borealis, mense Julio.

Sp. 28. *M. arenarius*. *Thorace punctatissimo; alis obscurè-hyalinis*. Fem. *Tibiis ferrugineis, posticis apice fuscis; valvula ventrali anum longe superante pallida; aculeo abdomine breviorе*. Mas. *Tibiis basi ferrugineis*. (Long. alar. .25—.28.)

Fem.—*M. glomerato* paullo major: antennæ corpore breviores: palpi ferruginei basi fusci: femora antica apice, tarsi iidem toti, intermedii basi, tibiæ et calcaria ferruginea; harum posticæ apice fuscae: alæ obscurè hyalinæ, stigmatе nervisque fusco-ferrugineis; squamulis nigris: thorax confertim punctatus, prope medium dorsi utrinque subdepressus; metathorax punctato reticulatus: segmenti 1^{mi}. scutum paulo longius quam latius, apice nonnihil dilatatum punctato-reticulatum; 2^{dum}. brevissimum subtilius aciculatum, lateribus læve: valvula ventralis pallida anum longè superans, compressa apice non acuminata: aculeus abdominis dimidio longior.—*Mas*, antennæ corpore multo longiores; tibiæ anticæ medio, et tarsi latius infuscata; tibiæ posteriores basi tantum ferrugineæ.

Habitat in *Salice argenteâ* arenarum æstate copiosè.—(*Mus. Soc. Ent.*)

Sp. 29. *M. sodalis*. Fem. *Thorace punctulato; tibiis basi, anticis totis flavo-testaceis; alis albidis, stigmatе stramineo; aculeo abdomine breviorе*.

Fem.—Præcedenti æqualis et non dissimilis, sculpturâ multo subtiliore: antennæ longiores; color tibiarum et calcarium pallidior, illarum posteriores latius fuscae: alæ albidæ aut fere hyalinæ, stigmatе obscure stramineo: thorax dorso non impressus: segmentum 1^{num}. angustius; 2^{dum}. longius quam illi: valvula ventralis anum æquans.

Sp. 30. *M. dilectus*. Fem. *Thorace granulato; pedibus flavo-testaceis, posterioribus fusco-nebulosis; coxis nigris; stigmatе bicolore; aculeo dimidii abdominis longitudine*.

Fem.—*M. glomerato* fere brevior: antennæ corporis longitudine apice crassiusculæ: palpi pallidè flavi basi fusci: pedes flavo-testacei, coxis nigris; femora posteriora saturiora, supra et subtus infuscata; tibiæ posticæ et tarsi summo apice fuscescentia: alæ hyalinæ; nervis pallide ferrugineis, interioribus flavicantibus, exterioribus decoloribus; stigma fusco-ferrugineum, basi flavescens; squamulæ nigræ: thorax confertim subtilissime punctulatus opacus: abdomen breve, segmenti 1^{mi}. scuto oblongo punctulato.

Habitat in *Salice* rarius.

Sp. 31. *M. coniferæ*. Mas et Fem. *Squamulis, tibiis tarsisque flavo-testaceis; femoribus anticis concoloribus, posticis fuscis.* Fem. *Aculeo abdominis dimidio brevior.*

Fem.—*M. glomerato* æqualis: antennæ fere corporis longitudine teretiusculæ: palpi pallide flavi: pedes antichi flavo-testacei coxis tantum nigris; femora intermedia lineolâ superâ et aliâ inferâ abbreviatis, postica latiûs fusca; vel hæc tota fusca relicta tantum lineola longitudinali testacea: alæ hyalinæ, stigmatibus nervisque disci dilute ferrugineis, exterioribus decoloribus; squamulæ flavo-testaceæ: thorax (ob pubescentiam confertam at subtilissimam) pruinosis, fere iridescens; metathorax et segmenti 1^{mi}. scutum subtilissime aciculata; hoc angustum apice nonnihil attenuatum: aculeus anum non multum superans.—*Mas.* femora antica lineolâ superâ, posteriora fere tota fusca.

Habitat in *Laricetis* minus frequens.

Sp. 32. *M. exilis*. Fem. *Tibiis tarsisque testaceis; aculeo abdominis dimidio brevior.*

Fem.—Præcedenti quodammodo affinis; dimidio minor, antennis et pedibus gracilioribus; tibiis posterioribus versus apicem tarsisque latiûs obscurioribus: femora antica basi, intermedia apice demto, postica tota nigra: segmenti 1^{mi}. scutum gracile equidem, sed postice non attenuatum ut insequentibus, confertim punctatum.

Sp. 33. *M. Umbellatarum*. Fem. *Abdominis subcompressi lateribus, squamulis pedibusque flavo-ferrugineis, posterioribus fusco nebulosis; coxis nigris; alis flavescens; aculeo dimidii abdominis longitudine.* (Long. alar. .22.)

Fem.—*M. coniferæ* dimidio minor: thorace pruinoso similis, sed abdomine subcompressa, metapodeo graciliore, etc. in sequentes propendet: antennæ graciles corporis longitudine: palpi pedesque

flavo-ferruginei; coxæ nigræ; pedes posteriores fusco-signati fere ut in *M. dilecto* (No. 30): alæ obscure flavescens, stigmatibus nervisque piceo-flavis; squamulis flavo-ferrugineis: thorax lævis; metathorax vage punctulatus: abdomen breve subcompressum, lateribus baseos ferrugineis; segmenti primi scutum paullo latius quam sequentibus, postice sensim attenuatum punctulatum.

Habitat in flosculis *Angelicæ sylvestris* autumno lectus.

Sp. 34. *M. lateralis*. Mas et Fem. *Abdominis compressi lateribus, squamulis pedibusque flavis; posticis fusco variis; coxis nigris; segmenti primi scuto gracillimo elevato.* Fem. *Aculeo dimidii abdominis longitudine.* (Long. corp. .12—.15; alar. .28—.34.)

Fem.—Antennæ corpore breviores fere filiformes: palpi pedesque flavi; posticorum coxæ nigræ, femora et tibiæ apice, tarsique fusca: alæ amplissimæ cærulescenti-hyalinæ, stigmatibus fusco; nervis exterioribus haud profecto decoloribus; squamulæ flavæ: thorax lævis pallido-pubescens; metathorax vage punctulatus: abdomen breve, valde compressum dorso fornicatum; segmenti 1^{mi}. scutum gracillimum elevatum, postice sensim attenuatum, punctulatum.—*Mas*, antennæ longiores crassiores apice teretes: abdomen minus.

Variat, Mas.—Sæpe femoribus posterioribus latere supero, tibiis intermediis apice, posticis usque ad medium infuscatis.

Habitat in gramine nemorum frequens.—(*Mus. Soc. Ent.*)

Sp. 35. *M. vitripennis*. Mas et Fem. *Abdominis compressi lateribus, squamulis pedibusque flavis; posticis fusco-variis, coxis nigris; segmenti 1^{mi}. scuto gracillimo elevato.* Fem. *Aculeo brevissimo.* (Long. alar. .35.)

Curt. E. B. 321. n. 8.

Fem.—Præcedenti simillimus, sed metathorax lævis; segmenti 1^{mi}. scutum adhuc gracilius læve; abdomen brevius; aculeus tantum subexertus: segmenta 2^{dum}. et 3^{tium}. modo flava puncto tantum dorsali communi nigro, a nigredine sequentium disjuncto.—*Mas*, abdomen minutissimum coxis posticis haud multo longius, generis *Evanicæ* habitum in animum revocans.

Habitat cum præcedente rarius.—(*Mus. Soc. Ent.*)

Sp. 36. *M. callidus*. Fem. *Abdominis compressi lateribus, squamulis pedibusque flavis; posticorum coxis basi, tibiis*

apice tarsisque fuscis ; segmenti primi scuto gracillimo elevato granulato ; aculeo brevissimo. (Long. corp. .12 ; alar. .26.)

Fem.—Proxime præcedentibus affinis ; *M. lateralem* segmenti primi latitudine referens (etsi punctura tam hujus segmenti quam metathoracis multo confertior sit) ; *M. vitripennem* vero aculeo vix subexerto ; sed abdomen adhuc brevius et minus compressum : alæ minores, obscure hyalinæ ; squamulæ flavæ : pedes postici magis ferruginei, coxis apice concoloribus, femoribus apice vix obscurioribus : præterea, calcaria cum *M. fulvipede*, &c. potius quam illis conveniunt.

Sp. 37. *M. exiguus.* *Fem.* *Abdominis compressi lateribus pedibusque pallide ferrugineis, coxis nigris ; posteriorum tibiis apice, femoribus tarsisque fuscis ; segmenti 1^{mi}. scuto gracillimo elevato ; aculeo abdominis dimidio brevior.* (Long. alar. .22.)

Fem.—*M. vitripenni* affinis duplo minor, aculeo longiore, segmenti 1^{mi}. scuto fere lineari, calcaribus ut in *M. fulvipede* : palpi pedesque pallide ferruginei, trochanteres omnes concolores ; coxæ nigre ; femora intermedia basi, postica fere tota, tibiæ posteriores apice, tarsisque (metatarsi basi demtâ) fusca : alæ cærulescenti-hyalinæ stigmatè pallido ; squamulis fuscis.

Habitat in Umbelliferis rarius.

Sp. 38. *M. fulvipes.* *Mas et Fem.* *Squamulis pedibusque fulvis ; coxis posticis nigris ; segmenti 1^{mi}. scuto gracillimo elevato.* *Fem.* *Aculeo brevissimo.* (Long. corp. .11—.14 ; alar. .24—.28.)

Microgaster glomeratus ? Spin. Ins. Lig. II. 149. n. 5.

Fem.—*M. glomerato* longior : antennæ gracillimæ corpore longiores : mandibulæ apice ferrugineæ ; palpi flavo-ferruginei : pedes elongati graciles ferruginei aut flavo-ferruginei ; coxæ posticæ nigre apice ferrugineæ ; calcaria postica metatarsi dimidio breviora, intermedia metatarso breviora recta, quæ in aliis præsertim vero *M. laterali* et *vitripenni* nonnihil curvata sunt metatarsi longitudinem attingentia : alæ quam illis minores glauco-hyalinæ, stigmatè sordide flavo, nervis dilute piceis ; squamulis ferrugineis : thorax lævis ; metathorax lateribus subtiliter punctulatus : abdomen subcompressum ; segmento 1^{mi}. scutum gracillimum elevatum,

postice sensim attenuatum, subtilissime aciculatum; 2^{dum}. bi-striatum, medio obsoletiûs aciculatum, lateribus obscurè lutescens: aculeus vix subexertus.

Mas.—Antennæ corpore plusquam dimidio longiores gracillimæ; pedes paulo validiores; posticorum tibiæ apice et tarsi nonnunquam fuscescentia: abdomen gracilius basi coarctatum.

Habitat in gramine nemorum passim frequens, ab æquinoctio inde, cæteris præcocior.—(*Mus. Soc. Ent.*)

Sp. 39. *M. popularis*. *Mas.* *Thorace lævi; tibiis flavis, posticis apice et subtus fuscis; alis albidis.*

Mas.—*M. glomerato* paulo major: niger: palpi flavescentes basi fusci: femora antica basi nigra, tibiæ tarsique flava aut flavo-testacea; tibiæ posteriores apice, posticæ etiam subtus et tarsi iidem fusca: alæ candido-hyalinæ costa et stigmate fusco-ferrugineis; nervis disci medii dilute fuscis, reliquis decoloribus: thorax lævis sericeus: segmentum 1^{mum}. scuto longiore quam latiore, apice rotundato-attenuato, lævi nitido, 2^{dum}. 3^{tio}. non brevius utrinque oblique impressum, medio subtiliter punctulatum; reliqua lævia nitida: statura hujus solito validior: vix dubito quidem *feminæ* aculeum fere brevem ut sequenti.

Hab.—Prodiit e folliculis albis segregatis.—(*Mus. G. C. Hyndman.*)

Sp. 40. *M. immunis*. *Fem.* *Thorace lævi; femoribus tibiisque flavo-testaceis; posterioribus illorum utrinque, harum apice, fuscis; alis hyalinis; aculeo brevissimo.*

Fem.—*M. glomerato* æqualis: antennæ longiores: palpi fusci apice pallidi: pedes flavo-testacei, coxis et trochanterum basi nigris; femora antica summa basi, intermedia lineolâ superâ et aliâ inferâ fuscis; postica fusca plaga longitudinali testaceâ; tibiæ posticæ et tarsi posteriores apice fuscescentia: alæ hyalinæ stigmate costaque piceis: thorax lævis nitidus: segmentum 1^{mum}. quam *M. glomerato* brevius scuto lateribus subrotundato medio latiore, subtiliûs aciculato; 2^{dum}. arcuato-impressum medio subtilissimè aciculatum: aculeus subexertus.

Sp. 41. *M. glomeratus*. *Mas et Fem.* *Thorace subtiliter punctulato; pedibus flavo-ferrugineis, coxis nigris, genubus posticis infuscatis; alis limpidis. Fem. Aculeo brevissimo.* (Long. corp. .12—.14.; alar. .24—.28.)

Vermiculi e Crambide . . **Wagner. Helvet.* 226.

Musca Brassicariæ erucæ . *Ray. Ins.* 260. *Goedart.* p. 59,
No. 11. *Reaumur.* II. T. 33.
F. 2—13. T. 34. F. 1, 2.
Mem. II. p. 419. *De Geer.* I.
T. 16. F. 6. *Geoffroy.* II.
331. 2.

Ichneumon glomeratus . *Linn. Fn. S.* 1646.

Cryptus *Fabr. Syst. Piez.* 90. 89.

Ichneumon glomerator . . *Thunb. Act. Petr.* IX. 349.

Microgaster glomeratus . *London, Mag.* V. 108. fig. a—h.

Fem.—Antennæ corpore breviores palpi pedesque flavo-ferruginei; coxæ nigræ; apex femorum posticorum supra fusco-lineatus; tarsi summo apice, postici latè infuscati: alæ limpidæ stigmatè fusco-ferrugineo; nervis disci nonnullis interruptè ferrugineis, plerisque flavescens, exterioribus planè decoloribus; squamulæ nigræ: alarum apex solito brevior et rotundior, cubiti basis sub stigmatè nonnihil obliquatus brevior: thoracis scutum punctulatum, scutellum parum convexum; metathorax brevis punctato-reticulatus, uti etiam segmenta 2 anteriora; quorum primi scutum secundo fere dimidio angustius, longius quam latius, lateribus flavis relectis; 2^{dum}. transversum 3^{tio}. brevius; intermedia solito longiora; ultima brevissima fornicato-deflexa: aculeus vix sub-exertus: venter antice flavo-pellucens.

Mas.—Antennæ corpore longiores: femora postica apice latiûs, tibiæ etiam apice infuscatæ; trochanteres basi nigri.

Habitat in larvis *Ponticæ Brassicæ* vulgatissimus: folliculi flavi aggregati.—(*Mus. Soc. Ent.*)

Sp. 42. *M. placidus.* *Mas. Thorace lævi; tibiis flavis, posticis apice fuscis; alis candidis; segmentis anterioribus latis aciculatis.* (Long. alar. .30.)

Mas.—Præcedente major: antennæ prælongæ teretes: palpi flavi basi fusci: femora antica pallide flava, basi summâ fusca; tibiæ tarsique flava; illarum posticæ apicæ, tarsique iidem fere toti fusciscentia: alæ candido-hyalinæ stigmatè fusco-ferrugineo; nervi disci medii dilute ferruginei; interiores flavescens; exteriores decolores: squamulæ nigræ: thorax dorso lævis nitidus: metathorax punctato-reticulatus: scutum segmenti primi vix

longius quam latius, (latius quidem quam *M. glomerato* sed paulo angustius quam sequentibus); segmenta 2 anteriora aciculata.

Hab.—————(*Mus. J. Curtis.*)

Sp. 43. *M. lineola*. Mas. *Thorace subtilissimè punctulato; femoribus tibiisque flavo-testaceis; posterioribus illorum utrinque, harum apice fuscis; alis albidis; segmentis tribus aciculatis.*

Curtis. E. B. 321. n. 11.

Mas.—*M. glomerato* æqualis: palpi flavi: pedum colores quales *M. immuni* (No. 40.) fere: alæ albidæ, stigmate nervisque disci medii dilute ferrugineis, reliquis decoloribus; squamulæ nigræ: thorax confertim at subtilissime punctulatus; metathorax punctato-reticulatus: abdomen solito brevius et latius, segmentis 3 anterioribus punctato-reticulatis; primum breve latum angulis apicis vix flavo-marginatis.

Hab.—Prodiit e larvâ *Scævæ Pyrastræ*.—(*Mus. J. Curtis.*)

Sp. 44. *M. præpotens*. Fem. *Thorace subtilissime punctulato; tibiis ferrugineis, posticis apice fuscis; alis limpidis; aculeo perbrevis.*

Fem.—*M. glomerato* major et adhuc robustior, antennis brevibus crassioribus: palporum et pedum colores fere quales *M. intricato* (No. 45), lætiores modo: alæ latæ apice rotundatæ (uti *M. glomerato*), limpidæ, stigmate crasso nigro-ferrugineo, nervis disci nonnullis ut in illo interrupte ferrugineis, reliquis decoloribus, costa interius flavicante; squamulæ nigræ: thorax nitidus subtilissimè punctulatus; scutellum læve; metathorax brevissimus punctato-reticulatus: segmenta 2 anteriora ut in sequentibus latitudine subæqualia, aciculata; aculeus magis exertus quam illis.

Sp. 45. *M. intricatus*. Fem. *Thorace punctatissimo; tibiis ferrugineis, posticis apice fuscis; alis obscure hyalinis; aculeo brevissimo.*

Fem.—*M. glomerato* fere æqualis: antennæ corporis longitudine: palpi ferruginei: femora antica basi nigra, tarsi anteriores et tibiæ ferrugineæ; harum posticæ apice (nonnunquam latiùs) fusæ: alæ obscure hyalinæ stigmate nervisque fuscis; squamulæ nigræ: thoracis dorsum opacum confertissimè, scutellum parciùs

punctatum; metathorax et segmenta duo antica punctato-reticulata aut rugulosa: aculeus vix subexertus.

Hab.—Folliculi latitabant intra globos spissos bombacinos stramineo-pallidos, graminum culmis appensos: prodiit ex his *Microgaster* parciûs, *Hemiteles fulvipes* vero copiosè.—(*Mus. G. C. Hyndman.*)

Sp. 46. *M. vestalis*. Mas et Fem. *Thorace punctatissimo; squamulis et tibiis ferrugineis, harum posticis apice fuscis; alis hyalinis.* Fem. *Aculeo brevissimo.*

Fem.—*M. intricato* simillimus: mesothoracis scutum et scutellum tota confertissime punctata opaca: alæ hyalinæ, stigmate dilutius ferrugineo; squamulæ ferrugineæ.

Sp. 47. *M. ruficrus*. Mas et Fem. *Thorace punctatissimo; squamulis pedibusque flavo-ferrugineis; posticorum coxis nigris et genubus infuscatis.* Fem. *Aculeo brevissimo.* (Long. alar. .22.)

Fem.—*M. intricati* statura et sculptura, plusquam dimidio minor: palpi flavo-ferruginei; pedes concolores; posticorum coxæ nigræ, femorum apex fusco-notatus ut in *M. glomerato*: alæ obscure hyalinæ stigmate ferrugineo.

Sp. 48. *M. gracilis*. Mas et Fem. *Thorace punctulato; tibiis flavo-ferrugineis; femoribus anticis concoloribus, posterioribus infuscatis.* Fem. *Aculeo brevissimo.*

Curt. E. B. 321. n. 12.

Fem.—Statura *M. intricati*, dimidio minor; thoracis punctura subtilior; antennæ longiores: pedes antichi flavo-ferruginei, coxis et trochanteribus nigris; posteriorum femora supra et subtus fusca; tibiæ posticæ apice et tarsi latiûs obsoletiûs fuscescentia: alæ hyalinæ stigmate ferrugineo; squamulæ nigræ.

Hab.——— (*Mus. J. Curtis.*)

Sp. 49. *M. rubripes*. Fem. *Thorace punctulato; antennis subtus, squamulis pedibusque rufis; coxis nigris; aculeo brevissimo.*

M. glomeratus. *Curt. E. B. 321. n. 7.*

Fem.—*M. glomerato* paulo major; statura fere præcedentium: antennæ corpore longiores, subtus rufescentes, basi clariûs: os

rufum, palpi pallidiores: pedes rufi, tarsi postici obscuriores; coxæ basi, posticæ totæ nigræ: alæ obscure hyalinæ stigmate fusco-ferrugineo; squamulæ rufæ: thorax confertim subtiliter punctulatus; metathorax et segmenta 2 anteriora aciculata: venter rufescens: aculeus vix subexertus.

Hab.—Prodiit è folliculis flavis *Hipparchi papilionarii* larvæ agglutinatis.—(*Mus. J. Curtis.*)

Sp. 50. *M. prætextatus*. Fem. *Thorace punctulato; abdomine postice, squamulis pedibusque flavo-ferrugineis; aculeo brevissimo.*

Fem.—Præcedentium statura fere, *M. glomerato* æqualis: antennæ longæ graciles: palpi pedesque flavo-ferruginei; posticorum geniculi fusco-punctati et coxæ basi fuscae: alæ obscure hyalinæ stigmate ferrugineo; squamulæ flavo-ferrugineæ: thorax dorso subtiliter confertim punctulatus: abdomen flavo-ferrugineum, segmentis 1^{mo}. 2^{do}. et 3^{ti}. basi dorso nigris; 7^{mo}. fuscescente: aculeus subexertus.

ADDENDUM.

Sp. 11. *M. meridianus*. (Long. corp. .18.; alar. .36.)

Fem. Variat.—Femora postica rufa apice nigra: alæ pallide flavæ, clarius pictæ, vix triangulum apicale nigricans vertice areolam attingit ibidem cum fascia transversa sinuata conjunctum; fascia interior magis obsoleta et interrupta; alarum posticarum nigredo occupat areolam cubitalem anteriorem et radialis apicem: aculeus abdominis dimidio paulo brevior. Patet itaque speciem 12^{mam}. cum hac sensim collabi et e numero specierum dimittendam esse. Forsitan utraque cum *M. deprimatore* conjungi posset.

Hab.—Lectus in *Rosa spinosissima* arenarum die Maii 20^{mo}.

ADDENDA.

Species mihi invisæ, vel non ritè determinatæ.

Sp. 51. *M. auriculatus*.

**Fabr. Syst. Piez.* 69. 82. “*Ichneumon auriculatus: ater capite abdominisque depressi segmento secundo tertioque rufis.* Parvus.

antennæ supra fuscæ subtus rufæ: caput rufum vertice nigro: thorax ater immaculatus: abdomen depressum petiolatum, basi apiceque nigrum: pedes rufi tarsis posticis nigris."

Spin. Ins. Lig. II. 147. 2. "Microgaster auriculatus: *niger segmentis intermediis rufis*. Alæ hyalinæ superiores fasciis 2 fuscis: abdomen segmentis 3 anterioribus rugosis."

Thunb. Act. Petr. VIII. p. 266. "Ichneumon auricator: *rufus abdominis basi ano tarsisque posticis nigris*."

In sectionem A. referendus est.

Sp. 52. M. deprimator.

**Panzer. Fn. Germ. 79. 11.*

Fabr. E. S. Suppl. 227. 182. "Ichneumon deprimator: *ater abdomine depresso plano, pedibus rufis*."

Spin. Ins. Lig. II. 148. 3. "Microgaster deprimator: *niger pedibus rufis, alis hyalinis fasciis 2 fuscis*. Alæ ut in *M. auriculato*: abdomen omnino nigrum, segmento primo maximo rugoso: pedes toti rufi."

Pertinet hic etiam sectionem A.

Sp. 53. M. sessilis.

Fabr. Ent. Syst. II. 194. 4. Evania sessilis, &c.

Coquebert. Ill. Dec. 1. T. 4. F. 8.

Fabr. Syst. Piez. 187. 8. "Ceropales sessilis: *atra abdomine brevi cylindrico*."

Spin. Ins. Lig. II. 148. 4. "Microgaster sessilis: *niger tibiis tarsisque rufis alis hyalinis*. Alæ profecto hyalinæ stigmate nigro: abdomen neutiquam cylindricum, sed supra depressum et subtus fornicatum, triangulare ut in reliquis Microgastribus, segmentis 1^{mo}. et 2^{do}. basi supra rugosis: pedes rufi coxis femoribus tarsisque nigris."

Sp. 54. M. dorsalis.

Spin. Ins. Lig. II. 151. 8. "Microgaster dorsalis: *niger ventre pedibusque rufis*. (Long. 2 linearum; lat. $\frac{1}{4}$.) Antennæ nigrae corpore longiores: caput nigrum: thorax concolor: abdomen supra nigrum segmentis 3 anterioribus rugosis, ventre rufo pallidiore: pedes rufi genubus nigris, tarsis nigro annulatis: alæ hyalinæ stigmate nigro: *femina* terebram gerit abbreviatam vix conspicuam."

Sp. 55. *M. aphidum*.

Spin. Ins. Lig. II. 150. 7. “*Microgaster aphidum: niger abdominis basi pedibusque quatuor anticis testaceis alis hyalinis. Alæ hyalinæ stigmatē nigro: pedes 4 anticī rufi aut testacei, postici concolores coxis femoribus nigris: abdomen supra perfecte lævigatum segmento 1^{mo}. testaceo ventre pallido.—Var. segmento 1^{mo}. nigro utrinque testaceo.*”

N.B.—*Synonyma a Spinola huc allata rejicienda sunt.*

Sp. 56. *M. necator*.

Scharfenberg. p. 960. n. 14. “*Ichneumon necator: niger pedibus abdomineque flavicantibus hoc apice nigro. (Long. 1 $\frac{1}{4}$ linearum.)* Antennæ nigræ setacæ corpore longiores: caput et thorax nigri nitidi immaculati: alæ hyalinæ irideæ stigmatē nigro: pedes aurantiaci femoribus posticis nigris: abdomen flavum segmentis ultimis nigris: aculeus absconditus.—*Femina* agglutinat ova cuti et pilis larvarum *Bombycis chrysorrhææ aurifluæ*, &c. Larvæ exclusæ albæ capite acuminato perforant cutem penetrantque in corpus illarum. Initio Junii ad mutationem subeundam e corpore exeunt, sibique folliculos parvos conficiunt angustos albos 1 $\frac{1}{2}$ lineas longos, socialiter aggregatos, e quibus decursu dierum 12—21, Ichneumones prorumpunt.”

Revocat auctor ad hanc speciem *Ichneumonem necatorem* Fabricii (qui a Gravenhorstio pro *Hemitele necatore* suo habetur); uterque laudavit *Ichneumonem*, Roesel. II. Vesp. T. 14. F. 3, 4. ab illorum descriptionibus tamen nonnihil discrepantem, quem Linneus ad *Ichn. glomeratum* jam antea adhibuerat, Scopoliū autem ad *Ichn. globatum*. *Ichn. necatorem* Scharfenbergii, ut plures alios nimis leviter adumbratos, a cultoribus Lepidopterorum mox agnoscendum expectemus.

Sp. 57. *M. tortricis*.

Schrank. Ins. Austr. 763. *Ichneumon tortricis: “niger minutus abdomine ovato depresso sessili subtus pallidiore. (Long. 1 $\frac{1}{3}$; alarum anticar. 1 $\frac{1}{3}$; aculei $\frac{1}{3}$; antennarum 1 lin.)—Hab. in larva tortricis fascianæ* larvulæ duæ apodes cylindricæ lunulato inflexæ, corpore rugoso molli capite retractili, unde natum præsens insectum.”

Schr. Fn. Boica. II. p. 2. 366. n. 2143. *Ichn. tortricis: “niger pedibus anticis et tibiis basi pallidis, abdomine sessili ovato-subdepresso. Mas et fem. In larvis tortricis gregarius, Junio mense*

evolat. Metamorphosin subit inter folia a Tortrice consuta in folliculis albis bombacinis aggregatis reticulo communi obductis."

Sp. 58. *M. Intercus*.

Schranck. Ins. Aust. 764. "Ichneumon *Intercus*: *minutus niger abdomine ovato depresso basi testaceo.* (Long. 2 lin.; antenn. $\frac{2}{3}$; alar. ant. 1; aculei $\frac{1}{2}$.) Simillimus priori sed abdominis basi et tibiis rufis."

Sp. 59. *M. gregarius*.

Schranck. Ins. Aust. 766. "Ichneumon *gregarius*: *niger pedibus abdominisque lateribus ferrugineis.* (Long. $1\frac{1}{2}$ lin.; alar. anticar. $1\frac{1}{2}$; antenn. $1\frac{2}{3}$.) Antennæ nigræ articulis plurimis minutis: caput nigrum lingua flava: pedes ferruginei: abdomen nigrum brevi petiolo thoraci annexum lateribus tamen et subtus basi flavum: alæ incumbentes hyalinæ anticæ macula marginali nigra.—*Hab. in larvis Papilionum gregarius.* Exeuntes proprios folliculos singuli aggregatos nent; sed folliculus albus non flavus."

Discrimen ab *M. glomerato* quod ex anni tempore Auctor duxit, nos falsum esse comperimus; hic etenim sæpius hyemem in folliculis durat vere proditurus; quod Réaumurius jam docuerat.

Sp. 60. *M. alvearifex*.

Schranck. Ins. Aust. 767. "Ichneumon *alvearifex*: *niger petiolatus pedibus ferrugineis, abdomine subtus basi decolore.*—*Hab. in folliculis albis in modum alvearis dispositis.*"

Laudat autem ad hanc auctor *Ichneumonem Geoffroy*, II. p. 322, qui a Fabricio ad *Ichn. alvearium* adhibetur.

Sp. 61. *M. tibialis*.

Curt. E. B. 321. No. 9. "Microgaster *tibialis*: *niger pedibus ochraceis, femoribus posterioribus et tarsis piceis, alis subfuscis.*"

Sp. 62. *M. atrator*.

Curt. ibid. No. 13. "Microgaster *atrator*: *niger tibiis et tarsis ochreis, posticis fusciscentibus.*"

Sp. 63. *M. Anomalon*.

Curt. E. B. 321. No. 15. "Microgaster anomalon: *niger corpore brevissimo compresso, femoribus anticis apice et tibiis ochreis.*"

Hic et proxime præcedentes ad sectionem B. pertinent.

Sp. 64. *Microgaster* ——— ?

Ray. Ins. 255. No. 13. "Vespa Ichneumon parva Erucigena nullis in cauda setis, corpore antennis et pedibus nigris. Ad marginem exteriorem alarum notæ nigræ et vix conspicuæ sunt. Hæc viridis cujusdam erucæ lineolis albicantibus notatæ præcoci alumna est. Vermiculi hujus generis productrices omnes unam quamprimum ex erucæ corpore erepserunt nidum sibi texunt e lana tenuissima alba, rotundum seu globosum nucis Avellanæ magnitudine."

Sp. 65. *Microgaster* ——— ?

Réaum. II. Mem. 11. p. 424. T. 35. F. 2. Ex erucis Phalenæ Aristolochiam, Urticam et Peucedanum depastis larvæ prodierunt. Hæ folliculos in globum communem bombacinum contexere.

Sp. 66. *Microgaster* ——— ?

Réaum. II. Mem. 11. p. 424. T. 35. F. 5, 6. E globis similibus in culmis graminum vulgatissimis prodierunt Ichneumones minutissimi antennis longis, abdomine ferrugineo tenuissimè petiolato.

Sp. 67. *Microgaster* ——— ?

Réaum. II. Mem. 11. p. 432. T. 33. F. 17. Larvæ hujus paulo majores quam *M. alvearii*, ex erucâ quercus folia depastâ prodierunt et ibidem folliculos albos in folio irregulariter aggregatos absque reticulo communi contexere.

Sp. 68. *Microgaster* ——— ?

Réaum. ibid. F. 14, 15. Larvæ hujus magnitudine intermediæ inter larvas præcedentis et *M. alvearii*, folliculos albos sericeos in folio graminis absque ordine aggregatos contexere.

Sp. 69. *Microgaster* ——— ?

Loudon. Mag. Nat. Hist. V. p. 768. *Microgaster glomeratus*; prodiit e larvis Phalenæ grossulariæ.

Sp. 70. *Microgaster* ——— ?

Loudon. Mag. Nat. Hist. V. p. 109. *Microgaster glomeratus*; prodierunt e larvis *Phalenæ Cajæ*. D^{nus}. Newman. D^{nus}. Westwood verò autumatur hunc diversum fore a *M. glomerato* vero (*ibid.* p. 301); quod verisimile videtur.

Sp. 71. *Microgaster* ——— ?

Merian. Ins. I. 22. Ex eruca (*Tortricis*?) Rosâ victitante prodierunt quinque larvæ. Folliculos harum albos eruca contexebat, die 14^{ma}. prodierunt Ichneumones parvi.

Sp. 72. *Microgaster* ——— ?

Merian. Ins. II. 41. Ex eruca *Vanesse Atalantæ*. Folliculi aggregati reticulo communi obtecti. Ichneumones nigri.

Sp. 73. *Microgaster* ——— ?

Merian. Ins. II. Ex eruca (*Noctuæ* ut videter) viridi lineis tribus flavis maculisque nigricantibus ornata in foliis alni inventâ prodierunt larvæ quamplurimæ; harum folliculos aggregatos ut *M. glomerati* tabula exhibet. Ichneumones parvi nigri.

Sp. 74. *Microgaster* ——— ?

Merian. Ins. III. 15. Ex eruca *Cynthiæ Gardui* prorupere larvæ quamplurimæ. Folliculos harum eruca contexebat in unum, reticulo gossipium referente. Ichneumones nigri, quorum aculeum abdominis longitudine tabula exhibet.

Sp. 75. *Microgaster*? ——— ?

Merian. Ins. II. 38. Ex eruca (*Tortricis*) viridi, capite flavo, urticæ folia convolvante prodierunt larvæ quamplurimæ. Folliculi harum sparsim positi. Ichneumones parvi nigricantes.

Sp. 76. *Microgaster*? ——— ?

Merian. Ins. II. 30. Ex eruca flava alni foliis enutrita proruperunt tres larvulæ quæ mox folliculos albicantes seorsim contexebant Ichneumones hinc enati flavi sunt pedibus concoloribus, capite nigro.

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